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ning of each regular issue of the PCT Gazette.

(54) Title: EMULSIONS FOR LIGNOCELLULOSIC PRODUCTS, METHODS OF THEIR MANUFACTURE, IMPROVED LIG-
NOCELLULOSIC PRODUCTS AND METHODS FOR THEIR MANUFACTURE

(57) Abstract: Emulsions are provided which are useful in imparting water-resistance to lignocellulosic products. In one embod-
iment, the emulsions contain a nonsaponifiable wax, a saponified wax, an alkyl phenol component, a dispersant/surfactant such as
a salt of polynaphthalenesulfonic acid, and a carboxymethylcellulose. Such emulsions may be added to hot, even boiling, water
without the emulsion separating or curdling. Various embodiments are stable for extended periods of time when stored at room
temperature, do not require the addition of a preservative biocide to avoid contributing to biodegradation in a lignocellulosic product.
The emulsions are pourable liquids at room temperature. Optionally, the emulsions may be added to lignocellulosic products with a
preservative to inhibit the preservative from leaching out.

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A. CLASSIFICATION OF SUBJECT MATTER

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US CL : 106/2, 18.29, 271, 272; 424/405, 638; 426/298

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
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Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 3,416,933 A (NICHOLSON et al.) 17 December 1968.	1-18, 33-40
A	US 4,055,433 A (MORONES) 25 October 1977.	1-18, 33-40.
A	US 4,497,919 A (VARGA et al.) 05 February 1985.	1-18, 33-40
A	US 4,681,910 A (CROCKATT et al.) 21 July 1987.	1-18, 33-40
A	US 6,165,261 A (WANTLING) 26 December 2000.	1-18, 33-40.
A	US 6,428,902 B1 (AMUNDSON et al.) 06 Augsut 2002.	1-40
A	US 6,663,707 B2 (WANTLING et al.) 16 December 2003.	1-18, 33-40
A	US 2003/0084825 A1 (WANTLING et al.) 08 May 2003.	1-18, 33-40
E,&	WO 2004/108625 A1 (BORDEN CHEMICAL INC.) 16 December 2004.	1-18, 33-40

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☐ See patent family annex.

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